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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

MEMORANDUM

SUBJECT: Approval of a Funding Request for a Removal Action
NVF Site
Kennett Square, Chester County, Pennsylvania

FROM: Edwin B. Erickson
Regional Administrator

NOV 03 1992

TO: Donald R. Clay, Assistant Administrator
Office of Solid Waste and Emergency Response (OS-100)

THRU: Henry L. Longest, II, Director
Office of Emergency and Remedial Response (OS-200)

ATTN: Deborah Y. Dietrich, Acting Director
Emergency Response Division (OS-210)

ISSUE

The attached CERCLA Funding Request pertains to the NVF Site in Kennett Square, Chester County, Pennsylvania. The NVF Company, which has operated a manufacturing plant ("the Plant") in Kennett Square since the early 1920's, used a heat transfer fluid that contained polychlorinated biphenyls ("PCBs") which was discharged from the Plant into a drainage ditch adjacent to the Plant and which subsequently migrated to the West Branch of the Red Clay Creek. Several Administrative Orders have been issued to the NVF Company that required cleanup of PCB-contaminated soils and debris from areas within the Plant and in an adjacent low tract of marshland leading from the Plant ("the swale"). An assessment of the Site performed in accordance with the National Oil and Hazardous Substances Contingency Plan ("NCP") by EPA Region III and officials from the Pennsylvania Department of Environmental Resources ("PADER"), the Delaware Department of Natural Resources and Environmental Control ("DNREC"), and the U.S. Fish and Wildlife Service, have identified a continuing threat to human health and the environment due to the presence of PCB-contaminated soils and sediments that are migrating from the Site through adjoining waterways.

Because conditions at the NVF Site meet removal criteria set forth in the NCP, Section 300.415, and pursuant to Delegation of Authority 14-1-A giving the Regional Administrator authority to approve CERCLA Removal Actions with a total of less than $2 million and completion within twelve (12) months, Region III has approved the use of CERCLA Funds in the amount of $1,975,400, of which approximately $1,899,800 are for extramural costs, to mitigate the threat to public health and the environment.

Attachment: Initial Funding Request.

AR100944

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REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

MEMORANDUM

SUBJECT: Request for Funds for a CERCLA Removal Action
NVF Site
Kennett Square, Chester County, Pennsylvania

FROM: Harry T. Daw, On-Scene Coordinator
Removal Enforcement Section (3HW33)

TO: Edwin B. Erickson
Regional Administrator (3RA00)

THRU: Abraham Ferdas, Associate Division Director
Office of Superfund Programs (3HW02)

I. ISSUE

A removal assessment performed in accordance with the National Contingency Plan ("NCP"), 40 CFR Part 300, by the On-Scene Coordinator ("OSC") has identified a release or threat of release of hazardous substances and a potential threat to human health and the environment due to the presence of uncontrolled hazardous substances at the NVF Site ("Site"), located in Kennett Square, Chester County, Pennsylvania. The primary concerns at this Site are the ingestion and bioaccumulation of poly-chlorinated biphenyl-contaminated ("PCB") soils and sediments by fish and other aquatic life in the West Branch of the Red Clay Creek ("WBRCC"), ingestion of fish contaminated with PCBs obtained from the WBRCC, and inhalation and dermal contact as a result of human exposure.

The OSC has determined that the Site meets the criteria for initiating a Removal Action under Section 300.415 of the NCP. In the event that a potentially responsible party fails to perform the actions set forth in this memo, it is anticipated that CERCLA funds will be expended to complete these actions.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

The NVF Site is located in Kennett Square, Chester County, Pennsylvania. The Site includes the NVF plant ("the Plant") and three nearby topographic features: a drainage ditch ("the drainage ditch") immediately adjacent and parallel to the Plant; a low tract of marshland leading from the Plant ("the swale"); and a portion of an unnamed tributary from the tributary's

juncture with the swale to its confluence with the West Branch of Red Clay Creek ("the tributary") which flows southwesterly into the West Branch of the Red Clay Creek. The WBRCC joins with the Bucktoe Creek and then flows in a southerly direction, ultimately joining with the East Branch of the Red Clay Creek to form the Red Clay Creek. A study conducted by the Delaware Department of Natural Resources and Environmental Control ("DNREC") from April 18, 1991 to May 29, 1992, in the Delaware portion of the Red Clay Creek, observed measurable increases in concentrations of PCBs and chlorinated pesticides in the fish captured as a part of the study. One of DNREC's objectives was to determine whether PCBs or other contaminants were migrating along the Red Clay Creek watershed from Pennsylvania to Delaware.

The location of the Site is in a moderately populated residential rural area of Pennsylvania (See Figure 1 attached). A mushroom farm is bisected by the flow of the swale and the unnamed tributary which enters the WBRCC, some 2,600 feet to the west of the swale. The drainage ditch is approximately 400 feet long and runs parallel to the Plant's southernmost boundary. Soil samples taken from the drainage ditch have shown PCB concentrations of up to 4,400 parts per million ("ppm") at depths of approximately seven feet. Additionally, sampling conducted by EPA's Field Investigation Team ("FIT") in the swale and the unnamed tributary to the West Branch of the Red Clay Creek found PCB concentrations in sediment ranging from non-detectable to 160 ppm in the unnamed tributary.

B. Site Background

Several Administrative Orders ("Orders") have been entered into with or were issued to the Respondent, NVF Company, for initiation of removal actions at the Site. In August of 1987, EPA and NVF entered into an Administrative Order that required NVF to perform sampling at the suspected source of the PCB contamination on the Plant and to undertake cleanup actions to prevent future migration of PCBs from the Plant. Upon completion of the work required by the 1987 Order, NVF was subsequently issued an Administrative Order in March of 1988 requiring NVF to excavate and dispose of PCB-contaminated sediments with concentrations above 50 ppm found in the swale and the unnamed tributary. During implementation of the March 1988 Order, NVF identified high concentrations of PCB-contaminated soils in the drainage ditch. EPA subsequently received a recommendation from the U.S. Fish and Wildlife Service which indicated that a cleanup level of 0.1 ppb in the swale and the unnamed tributary would be necessary to assure future long-term protection of aquatic life in the WBRCC. In response to these concerns, Region III determined that removal of the PCB-contaminated soils from the drainage ditch and the installation of engineering controls to limit further offsite migration from the Site is necessary. NVF declined to voluntarily perform the work as specified by EPA.

C. Types of Substances Present

The PCB contamination present at the Site has been the subject of several sampling investigations and response efforts, as described above. In the drainage ditch there are an estimated 1,500-2,000 cubic yards of contaminated soil above the 10 ppm cleanup level prescribed by PADER and further described in Section VI.D., below. This soil has been found to have PCB contamination of up to 4,400 ppm. (See Attachment 2.)

The swale underwent a PRP-conducted Removal Action in 1988, as described above. NVF excavated and disposed of approximately 800 cubic yards of PCB-contaminated sediments, cleaning to a level of 10 ppm pursuant to the March 1988 Administrative Order. However, since the swale is immediately downstream of the drainage ditch it is likely that some degree of recontamination of the swale and the unnamed tributary has occurred.

The unnamed tributary did not undergo any excavation pursuant to the March 1988 Order. At that time NVF collected approximately seven samples from the tributary at EPA's direction and none of the samples were found to have PCB concentrations greater than 50 ppm--EPA's Action Level at that time.

D. National Priorities List Status

A Preliminary Assessment and Site Investigation ("PA/SI") was performed for the NVF Site. This PA/SI assessment included the geographical area covered by the NVF Plant, the Noznesky Junkyard and the area encompassed by the swale to the east, the unnamed tributary to the south, the WBRCC to the west and the railroad tracks to the north. The Site has been informally ranked using the Hazard Ranking System ("HRS") and received a preliminary score in excess of 28.5, indicating likely proposal for listing on the CERCLA National Priorities List ("NPL").

E. State and Local Authorities' Roles

The Pennsylvania Department of Environmental Resources ("PADER") has conducted numerous inspections at the Plant under various statutes. The EPA and the PADER have been in constant contact regarding this Site. The OSC continues to coordinate all Site activities with the PADER and DNREC.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (i), (ii), (iii), (vi), and (vii) of Section 300.415 directly apply as follows to the conditions at the NVF Site:

A. 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

Access to surface soil contamination at the Site is unrestricted. Airborne contaminated soil particles may pose a direct contact, inhalation and ingestion threat to persons entering the Site. Local residents have been observed routinely traversing the area encompassed by the Site. The swale and the unnamed tributary, which have been found to have PCB concentrations of up to 160 ppm, bisect an active mushroom farm. PCBs have been demonstrated to cause cancer in animals and are suspected human carcinogens. PCBs have also been observed in fish taken from the Red Clay Creek downstream from the Site. If PCBs continue to migrate from the NVF Site to other locations downstream and PCBs are ingested by fish or humans the PCBs may bioaccumulate in body tissues.

B. 300.415 (b)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

PCB-contaminated sediments found in the drainage ditch, swale and the unnamed tributary have migrated to the WBRCC and the Red Clay Creek. This discouraged the Delaware Department of Natural Resources and Environmental Control from stocking trout in the Red Clay Creek as had been done previously. In the spring of 1991, the DNREC performed a study of the Red Clay Creek with one goal being to determine the bio-availability of certain contaminants, including PCBs, to the aquatic biota in the Red Clay Creek, as described above. The draft results of this study found an increase of PCBs and other contaminants in the tissues of the fish released and recaptured during this study. The results indicate that a source of PCB-contaminated sediments continues to contribute to downstream migration of contaminants. DNREC has not resumed trout stocking of the Red Clay Creek since it stopped in 1987. The Delaware Department of Health and Social Services issued a joint health advisory in 1986 with the DNREC for the Red Clay Creek, warning individuals that ingestion of fish caught from the stream could cause adverse health effects. Although a health advisory has been issued, this may not prevent individuals from ingesting fish caught from the Red Clay Creek.

C. 300.415 (b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate."

The drainage ditch has been found to have an average PCB concentration at the surface of 1,409 ppm and an average

subsurface concentration of 316 ppm. The highest concentrations found in the drainage ditch at the surface and at a subsurface depth were 4,400 and 1,500 ppm, respectively.

D. 300.415 (b)(2)(vii) "The availability of other appropriate federal or state response mechanisms to respond to the release."

The State of Pennsylvania does not have the resources at this time to undertake a cleanup action of the magnitude required at this Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this funding request, may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment. Earlier endangerment determinations by EPA were made at this Site in 1987 and 1988. On these occasions EPA determined that the conditions at the Site represented a threat to public health, welfare and the environment.

V. PROPOSED ACTION AND COSTS

A. Actions

The actions proposed for the NVF Site are designed to eliminate the imminent threat posed by the Site. The proposed actions are as follows:

- Perform sampling in the drainage ditch, swale and unnamed tributary sufficient to delineate areas of PCB contamination.
- Secure and prepare the Site for excavation of PCB-contaminated material identified from sampling.
- Excavate all areas of the drainage ditch, swale, and unnamed tributary exhibiting PCB concentrations above 50 ppm to a level specified by applicable or relevant and appropriate environmental and health requirements ("ARARs"), as appropriate.
- Backfill with at least ten (10) inches of clean fill and revegetate where appropriate.
- Transport all hazardous substances from the Site for disposal in conformance with EPA's Offsite Policy.

- Conduct an engineering evaluation of the Site to determine the most appropriate and cost-effective method for limiting the further migration of contaminants from the drainage ditch, swale and the unnamed tributary into the WBRCC.

- Select and implement an alternative developed from the engineering evaluation.

Barring unforeseen circumstances and disposal restrictions, it is estimated that the project will run less than the statutory 12-month time limit for removal actions.

B. Estimated Costs

Extramural Costs	
Regional Allowance Costs	
ERCS	$1,110,000
20% Contingency	222,000
Subtotal	$1,332,000
Other Costs	260,000
TAT	60,000
Subtotal	$320,000
15% Contingency	247,800
Total Extramural Costs	$1,899,800
Intramural Costs	
Direct Costs	27,000
Indirect Costs	48,600
Total Intramural Costs	$75,600
Total Estimated Project Ceiling	$1,975,400

C. Contribution to Remedial Performance

The NVF Site is currently not ranked on the NPL; however, the Site has obtained a preliminary Hazard Ranking System ("HRS") score that indicates that it may be proposed for future inclusion on the NPL. The preliminary draft information that is currently available indicates that the surface water pathway for migration is of primary concern. Although the Site is not currently on the NPL, the actions proposed by this funding request are within accepted removal practices and are expected to abate threats that

meet the NCP removal criteria, as well as being consistent with any potential remedial actions. The proposed activities are not anticipated to impede any future remedial actions and will enhance Site stabilization in the interim.

D. Compliance With ARARS

The proposed Removal Action set forth in this memorandum will comply with all ARARs, to the extent practicable, considering the exigencies of the situation. PADER has informed EPA that the PCB cleanup levels for this Site should be 10 ppm in the drainage ditch and 1 ppm in the swale and unnamed tributary. The OSC contacted George Danyliw Director of PADER's Regional Hazardous Sites Cleanup Act ("HSCA") program for these ARARs. The OSC will take actions to determine whether the above ARARS are appropriate for use at this Site. Additionally, the OSC has consulted EPA's "Guidance on Remedial Actions for Superfund Sites with PCB Contamination," EPA 540 G-90 007, August 1990, while developing response options for this Site.

VII. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION BE DELAYED

If no action is taken or the action is delayed, the threat of inhalation, direct contact and ingestion in humans and bioaccumulation of PCBs in the environment will increase and continue to migrate offsite due to weathering effects and continued drainage to surface water pathways. Access to the Site is unrestricted and expected to remain as such.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the NVF Site.

IX. ENFORCEMENT

See attached Confidential Enforcement Memorandum.

X. RECOMMENDATION

Because conditions at the NVF Site meet the NCP Section 300.415 criteria for a removal, I recommend your approval of this request for a total of $ 1,975,400, all of which are Regional Allowance Costs. You may indicate your approval or disapproval by signing below. I recommend your approval to initiate response actions due to the nature of the threat described herein.

Approved: _____ Date: NOV 03 1992

Disapproved: _____ Date: _____

Attachment: Confidential Enforcement Memorandum